10/519,164

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FILE 'HOME' ENTERED AT 14:31:21 ON 08 AUG 2006

=> b reg
COST IN U.S. DOLLARS                            SINCE FILE      TOTAL
                                                   ENTRY    SESSION
FULL ESTIMATED COST                                 0.21       0.21

FILE 'REGISTRY' ENTERED AT 14:31:44 ON 08 AUG 2006
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STRUCTURE FILE UPDATES:     7 AUG 2006  HIGHEST RN 899508-12-4
DICTIONARY FILE UPDATES:    7 AUG 2006  HIGHEST RN 899508-12-4

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TSCA INFORMATION NOW CURRENT THROUGH January 6, 2006

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document.  For information
on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html

=> s nmainpsk/sqep
            1 NMAINPSK/SQEP
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L1          1 NMAINPSK/SQEP
              (NMAINPSK/SQEP AND SQL=8)

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L2          4 NMAINPSK/SQSP

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            1 FALPQY/SQEP
        71296 SQL=6
L3          1 FALPQY/SQEP
              (FALPQY/SQEP AND SQL=6)

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L4         65 FALPQY/SQSP

=> s fpqylqy/sqep
            1 FPQYLQY/SQEP
        59184 SQL=7
L5          1 FPQYLQY/SQEP
              (FPQYLQY/SQEP AND SQL=7)

=> s fpqylqy/sqsp
L6         30 FPQYLQY/SQSP

=> b hcaplus
COST IN U.S. DOLLARS                            SINCE FILE      TOTAL
                                                   ENTRY    SESSION
FULL ESTIMATED COST                               108.70     108.91

FILE 'HCAPLUS' ENTERED AT 14:34:35 ON 08 AUG 2006
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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FILE COVERS 1907 - 8 Aug 2006  VOL 145 ISS 7
FILE LAST UPDATED: 7 Aug 2006  (20060807/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.

=> d his

     (FILE 'HOME' ENTERED AT 14:31:21 ON 08 AUG 2006)

     FILE 'REGISTRY' ENTERED AT 14:31:44 ON 08 AUG 2006
L1            1 S NMAINPSK/SQEP
L2            4 S NMAINPSK/SQSP
L3            1 S FALPQY/SQEP
L4           65 S FALPQY/SQSP
L5            1 S FPQYLQY/SQEP
L6           30 S FPQYLQY/SQSP

     FILE 'HCAPLUS' ENTERED AT 14:34:35 ON 08 AUG 2006

=> s l1
L7            3 L1

=> s l2
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=> s l3
L9            2 L3

=> s l4
L10          66 L4

=> s l5
L11           3 L5

=> s l6
L12          16 L6

=> d l7 1-3 bib abs

L7   ANSWER 1 OF 3  HCAPLUS  COPYRIGHT 2006 ACS on STN
AN   2004:5123  HCAPLUS
DN   140:71022
TI   Casein αS2 peptides with angiotensin I-converting enzyme
     (ACE)-inhibiting activity for the preparation of medicaments and
```

foodstuffs for the treatment of hypertension
IN Tauzin, Jerome; Miclo, Laurent; Lefranc, Catherine; Boudier, Jean-Francois; Gaillard, Jean-Luc
PA Ingredia, Fr.
SO Eur. Pat. Appl., 19 pp.
CODEN: EPXXDW
DT Patent
LA French
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI EP 1374885	A1	20040102	EP 2003-370025	20030624
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
FR 2841473	A1	20040102	FR 2002-8036	20020627
FR 2841473	B1	20040917		
CA 2490282	AA	20040108	CA 2003-2490282	20030624
WO 2004002509	A2	20040108	WO 2003-FR1945	20030624
WO 2004002509	A3	20040415		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003255691	A1	20040119	AU 2003-255691	20030624
BR 2003012214	A	20050412	BR 2003-12214	20030624
JP 2005530851	T2	20051013	JP 2004-516859	20030624
PRAI FR 2002-8036	A	20020627		
WO 2003-FR1945	W	20030624		

AB The invention discloses peptides derived from casein αS2 with ACE-inhibiting activity for the prevention and treatment of hypertension. The peptides may be included in pharmaceutical compns. and foodstuffs.
RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2003:509734 HCAPLUS
DN 140:241
TI Bioactive peptides from tryptic hydrolysate of bovine αS2-casein
AU Tauzin, Jerome; Miclo, Laurent; Roth, Stephane; Spiesser, Estelle; Molle, Daniel; Gaillard, Jean-Luc
CS Laboratoire des BioSciences de l'Aliment, Faculte des Sciences, UA INRA 885, Vandoeuvre-les-Nancy, 54500, Fr.
SO Peptides 2000, Proceedings of the European Peptide Symposium, 26th, Montpellier, France, Sept. 10-15, 2000 (2001), Meeting Date 2000, 755-756. Editor(s): Martinez, Jean; Fehrentz, Jean-Alain. Publisher: Editions EDK, Paris, Fr.
CODEN: 69EDWK; ISBN: 2-84254-048-4
DT Conference
LA English
AB Bovine αS2-casein was subjected to tryptic hydrolysis. Generated peptides had angiotensin I-converting enzyme inhibitory activity and μ and δ opioid receptor binding activities.
RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:839514 HCAPLUS
DN 138:362404
TI Angiotensin-I-converting enzyme inhibitory peptides from tryptic hydrolysate of bovine αS2-casein
AU Tauzin, Jerome; Miclo, Laurent; Gaillard, Jean-Luc
CS Laboratoire des BioSciences de l'Aliment, Faculte des Sciences et Techniques, UC 885 INRA, Universite Henri Poincare Nancy 1, Vandoeuvre-les-Nancy, 54506, Fr.
SO FEBS Letters (2002), 531(2), 369-374
CODEN: FEBLAL; ISSN: 0014-5793
PB Elsevier Science B.V.
DT Journal
LA English
AB Angiotensin-I-converting enzyme (ACE) inhibitory activity of a tryptic digest of bovine αS2-casein (αS2-CN) was extensively investigated. Forty-three peptide peaks were isolated and tested. Seven casokinins (i.e. CN-derived ACE inhibitory peptides) were identified and their IC50 values were determined Four peptides exhibited an IC50 value lower than 20 μM. Peptides αS2-CN (f174-181) and αS2-CN (f174-179) had IC50 values of 4 μM. Surprisingly, deletion of the C-terminal dipeptide of two of these casokinins did not significantly alter their inhibitory activity.
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FILE 'REGISTRY' ENTERED AT 14:31:44 ON 08 AUG 2006
L1 1 S NMAINPSK/SQEP
L2 4 S NMAINPSK/SQSP
L3 1 S FALPQY/SQEP
L4 65 S FALPQY/SQSP
L5 1 S FPQYLQY/SQEP
L6 30 S FPQYLQY/SQSP

FILE 'HCAPLUS' ENTERED AT 14:34:35 ON 08 AUG 2006
L7 3 S L1
L8 6 S L2
L9 2 S L3
L10 66 S L4
L11 3 S L5
L12 16 S L6

=> d l8 1-6 bib abs

L8 ANSWER 1 OF 6 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:5123 HCAPLUS
DN 140:71022
TI Casein αS2 peptides with angiotensin I-converting enzyme (ACE)-inhibiting activity for the preparation of medicaments and foodstuffs for the treatment of hypertension
IN Tauzin, Jerome; Miclo, Laurent; Lefranc, Catherine; Boudier, Jean-Francois; Gaillard, Jean-Luc
PA Ingredia, Fr.
SO Eur. Pat. Appl., 19 pp.
CODEN: EPXXDW
DT Patent
LA French
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI EP 1374885	A1	20040102	EP 2003-370025	20030624
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				

IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK

FR 2841473	A1	20040102	FR 2002-8036	20020627
FR 2841473	B1	20040917		
CA 2490282	AA	20040108	CA 2003-2490282	20030624
WO 2004002509	A2	20040108	WO 2003-FR1945	20030624
WO 2004002509	A3	20040415		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2003255691	A1	20040119	AU 2003-255691	20030624
BR 2003012214	A	20050412	BR 2003-12214	20030624
JP 2005530851	T2	20051013	JP 2004-516859	20030624
PRAI FR 2002-8036	A	20020627		
WO 2003-FR1945	W	20030624		

AB The invention discloses peptides derived from casein αS2 with ACE-inhibiting activity for the prevention and treatment of hypertension. The peptides may be included in pharmaceutical compns. and foodstuffs.

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ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 2 OF 6 HCAPLUS COPYRIGHT 2006 ACS on STN
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DN 140:241
TI Bioactive peptides from tryptic hydrolysate of bovine αS2-casein
AU Tauzin, Jerome; Miclo, Laurent; Roth, Stephane; Spiesser, Estelle; Molle, Daniel; Gaillard, Jean-Luc
CS Laboratoire des BioSciences de l'Aliment, Faculte des Sciences, UA INRA 885, Vandoeuvre-les-Nancy, 54500, Fr.
SO Peptides 2000, Proceedings of the European Peptide Symposium, 26th, Montpellier, France, Sept. 10-15, 2000 (2001), Meeting Date 2000, 755-756. Editor(s): Martinez, Jean; Fehrentz, Jean-Alain. Publisher: Editions EDK, Paris, Fr.
CODEN: 69EDWK; ISBN: 2-84254-048-4
DT Conference
LA English
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ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2006 ACS on STN
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DN 138:362404
TI Angiotensin-I-converting enzyme inhibitory peptides from tryptic hydrolysate of bovine αS2-casein
AU Tauzin, Jerome; Miclo, Laurent; Gaillard, Jean-Luc
CS Laboratoire des BioSciences de l'Aliment, Faculte des Sciences et Techniques, UC 885 INRA, Universite Henri Poincare Nancy 1, Vandoeuvre-les-Nancy, 54506, Fr.
SO FEBS Letters (2002), 531(2), 369-374
CODEN: FEBLAL; ISSN: 0014-5793
PB Elsevier Science B.V.
DT Journal
LA English
AB Angiotensin-I-converting enzyme (ACE) inhibitory activity of a tryptic digest of bovine αS2-casein (αS2-CN) was extensively investigated. Forty-three peptide peaks were isolated and tested. Seven casokinins (i.e. CN-derived ACE inhibitory peptides) were identified and their IC50 values were determined Four peptides exhibited an IC50 value lower than 20 μM. Peptides αS2-CN (f174-181) and αS2-CN (f174-179) had IC50 values of 4 μM. Surprisingly, deletion of the C-terminal dipeptide of two of these casokinins did not significantly alter their inhibitory activity.

RE.CNT 50 THERE ARE 50 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 4 OF 6 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:758248 HCAPLUS
DN 138:90063
TI The development of electro-membrane filtration for the isolation of bioactive peptides: the effect of membrane selection and operating parameters on the transport rate
AU Bargeman, G.; Koops, G.-H.; Houwing, J.; Breebaart, I.; van der Horst, H. C.; Wessling, M.
CS NIZO Food Research, Ede, 6710 BA, Neth.
SO Desalination (2002), 149(1-3), 369-374
CODEN: DSLNAH; ISSN: 0011-9164
PB Elsevier Science B.V.
DT Journal
LA English
AB The ability to produce functional food ingredients from natural sources becomes increasingly attractive to the food industry. Antimicrobial (bioactive) ingredients, like peptides and proteins, can be isolated from hydrolyzates with membrane filtration and/or chromatog. Electro-membrane filtration (EMF) is an alternative for the isolation of these usually strongly charged components. It is believed to be more selective than membrane filtration and less costly than chromatog. The isolation of bioactive peptides from a hydrolyzate of αs2-casein, a protein originating from milk, was studied as a model separation for the development of EMF. This separation can be used as an example application for the isolation of other charged components from complex feedstocks in several industries. After 4 h EMF the product consisted for 100% of proven or anticipated charged bioactive components. Diffusion and convection were negligible in relation to electrophoretic transport, since only charged components were recovered in the permeate product. The most important peptide (26% on total protein, starting from 7.5% in the feed) was αs2-casein (183-207), a very potent peptide against Gram pos. and Gram neg. microorganisms. The transport rate of αs2-casein (183-207) was reduced strongly when a polysulfone membrane with a mol. weight cut-off below 20 kDa was used. The amount of αs2-casein (183-207) transported increased practically linearly with the concentration and the applied p.d. The use of desalinated feeds to further increase the elec. field strength in the feed compartment resulted in higher transport rates, but this increase was lower than expected probably due to the lower electrophoretic mobility. An average transport rate of 2.5 and 4 g/m2.h at maximum was achieved during 4 h EMF using GR60PP (25 kDa) and GR41PP (100 kDa) membranes, resp.

RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 5 OF 6 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1992:569689 HCAPLUS
DN 117:169689
TI HPLC analysis of commercial casein phosphopeptides (CPP)
AU Hirayama, Masao; Toyota, Kyoko; Yamaguchi, Goichi; Hidaka, Hidemasa; Naito, Hiroshi
CS Bio Sci. Lab., Meiji Seika Kaisha, Ltd., Sakado, 350-02, Japan
SO Bioscience, Biotechnology, and Biochemistry (1992), 56(7), 1126-7
CODEN: BBBIEJ; ISSN: 0916-8451
DT Journal

LA English
AB Constituents of the com. casein phosphopeptides CPP-I and CPP-III (obtained by tryptic hydrolysis of casein) were separated by HPLC (ODS column at 40°; trifluuroacetate-MeCN gradient elution; detection at 215 nm). In some expts., a preliminary separation of phosphoproteins was made by Fe3+ affinity chromatog. on chelating Sepharose prior to the HPLC anal. Two main peaks were evident, corresponding to fragments of αs2-casein (1-32) and β-casein (1-28) on the basis of amino acid composition and N-terminal sequences. The CPP contents of CPP-I and CPP-III were estimated to be 12-17% and 83-93%, resp.

L8 ANSWER 6 OF 6 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1977:417534 HCAPLUS
DN 87:17534
TI Complete amino acid sequence of bovine αS2-casein
AU Brignon, Ghislaine; Ribadeau Dumas, Bruno; Mercier, Jean Claude; Pelissier, Jean Pierre; Das, B. C.
CS Lab. Rech. Proteines, Inst. Natl. Rech. Agron., Jouy-en-Josas, Fr.
SO FEBS Letters (1977), 76(2), 274-9
CODEN: FEBLAL; ISSN: 0014-5793
DT Journal
LA English
AB The complete primary amino acid sequence of bovine αS2-casein was determined by standard methods. In addition, the possible sites of phosphorylation on this protein were localized. This protein contains 207 amino acid residues, including 2 cysteines, and 10-13 phosphate groups and has a calculated mol. weight of 25,150-15,390 daltons.

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(FILE 'HOME' ENTERED AT 14:31:21 ON 08 AUG 2006)

FILE 'REGISTRY' ENTERED AT 14:31:44 ON 08 AUG 2006
L1 1 S NMAINPSK/SQEP
L2 4 S NMAINPSK/SQSP
L3 1 S FALPQY/SQEP
L4 65 S FALPQY/SQSP
L5 1 S FPQYLQY/SQEP
L6 30 S FPQYLQY/SQSP

FILE 'HCAPLUS' ENTERED AT 14:34:35 ON 08 AUG 2006
L7 3 S L1
L8 6 S L2
L9 2 S L3
L10 66 S L4
L11 3 S L5
L12 16 S L6

=> d l9 1-2 bib abs

L9 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:5123 HCAPLUS
DN 140:71022
TI Casein αS2 peptides with angiotensin I-converting enzyme (ACE)-inhibiting activity for the preparation of medicaments and foodstuffs for the treatment of hypertension
IN Tauzin, Jerome; Miclo, Laurent; Lefranc, Catherine; Boudier, Jean-Francois; Gaillard, Jean-Luc
PA Ingredia, Fr.
SO Eur. Pat. Appl., 19 pp.
CODEN: EPXXDW
DT Patent
LA French
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1374885	A1	20040102	EP 2003-370025	20030624
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	FR 2841473	A1	20040102	FR 2002-8036	20020627
	FR 2841473	B1	20040917		
	CA 2490282	AA	20040108	CA 2003-2490282	20030624
	WO 2004002509	A2	20040108	WO 2003-FR1945	20030624
	WO 2004002509	A3	20040415		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2003255691	A1	20040119	AU 2003-255691	20030624
	BR 2003012214	A	20050412	BR 2003-12214	20030624
	JP 2005530851	T2	20051013	JP 2004-516859	20030624
PRAI	FR 2002-8036	A	20020627		
	WO 2003-FR1945	W	20030624		

AB The invention discloses peptides derived from casein αS2 with ACE-inhibiting activity for the prevention and treatment of hypertension. The peptides may be included in pharmaceutical compns. and foodstuffs.
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L9 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:839514 HCAPLUS
DN 138:362404
TI Angiotensin-I-converting enzyme inhibitory peptides from tryptic hydrolysate of bovine αS2-casein
AU Tauzin, Jerome; Miclo, Laurent; Gaillard, Jean-Luc
CS Laboratoire des BioSciences de l'Aliment, Faculte des Sciences et Techniques, UC 885 INRA, Universite Henri Poincare Nancy 1, Vandoeuvre-les-Nancy, 54506, Fr.
SO FEBS Letters (2002), 531(2), 369-374
CODEN: FEBLAL; ISSN: 0014-5793
PB Elsevier Science B.V.
DT Journal
LA English
AB Angiotensin-I-converting enzyme (ACE) inhibitory activity of a tryptic digest of bovine αS2-casein (αS2-CN) was extensively investigated. Forty-three peptide peaks were isolated and tested. Seven casokinins (i.e. CN-derived ACE inhibitory peptides) were identified and their IC50 values were determined Four peptides exhibited an IC50 value lower than 20 μM. Peptides αS2-CN (f174-181) and αS2-CN (f174-179) had IC50 values of 4 μM. Surprisingly, deletion of the C-terminal dipeptide of two of these casokinins did not significantly alter their inhibitory activity.
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=> d his

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     FILE 'REGISTRY' ENTERED AT 14:31:44 ON 08 AUG 2006
L1             1 S NMAINPSK/SQEP
L2             4 S NMAINPSK/SQSP
L3             1 S FALPQY/SQEP
L4            65 S FALPQY/SQSP
L5             1 S FPQYLQY/SQEP
L6            30 S FPQYLQY/SQSP

     FILE 'HCAPLUS' ENTERED AT 14:34:35 ON 08 AUG 2006
L7             3 S L1
L8             6 S L2
L9             2 S L3
L10           66 S L4
L11            3 S L5
L12           16 S L6

=> s l4 and casein
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         60044 CASEIN
         24638 CASEINS
         66633 CASEIN
                 (CASEIN OR CASEINS)
L13         17 L4 AND CASEIN

=> d l13 1-17 bib abs

L13  ANSWER 1 OF 17  HCAPLUS  COPYRIGHT 2006 ACS on STN
AN   2005:493749  HCAPLUS
DN   143:40600
TI   Peptide derivatization for enhancing protein identification by mass
     spectrometry
IN   Reilly, James P.; Beardsley, Richard L.
PA   Indiana University Research and Technology Corporation, USA
SO   PCT Int. Appl., 53 pp.
     CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 1
     PATENT NO.           KIND   DATE        APPLICATION NO.         DATE
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PI   WO 2005052563         A1    20050609    WO 2004-US38932         20041119
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             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
             LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
             NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
             TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
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             SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,
             NE, SN, TD, TG
PRAI US 2003-523643P      P     20031120
AB   One aspect of the present invention is directed to a dual labeling
     strategy that enhances the mass spectrometry anal. of peptides.  In one
     embodiment a de novo sequencing method is provided that utilizes both
     guanidination of lysine residues in conjunction with amidination of the
     N-termini of peptides to be analyzed by mass spectrometry.  This approach
     facilitates identification of N- and C-terminal fragment ions.
RE.CNT  3     THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13  ANSWER 2 OF 17  HCAPLUS  COPYRIGHT 2006 ACS on STN
AN   2005:28061  HCAPLUS
DN   143:265786
TI   Isolation and characterisation of antibacterial peptides derived from the
     f(164-207) region of bovine αS2- casein
AU   McCann, K. B.; Shiell, B. J.; Michalski, W. P.; Lee, A.; Wan, J.;
     Roginski, H.; Coventry, M. J.
CS   Institute of Land and Food Resources, Gilbert Chandler College, The
     University of Melbourne, Werribee, VIC. 3030, Australia
SO   International Dairy Journal (2005), 15(2), 133-143
     CODEN: IDAJE6; ISSN: 0958-6946
PB   Elsevier B.V
DT   Journal
LA   English
AB   A chymosin digest of sodium caseinate, which showed antibacterial activity
     against Listeria innocua, was fractionated using reverse phase high
     performance liquid chromatog. and the purified antibacterial peptides were
     characterized by mass spectrometry, N-terminal amino acid sequencing and
     comparison to peptide masses of theor. enzymic digests of milk proteins.
     Five antibacterial peptides, Cr1, Cr3, Cr4, Cr5 and Cr7 corresponding to
     amino acid residues 181-207, 180-207, 175-207, 164-207 and 172-207 of
     bovine αS2- casein, resp., were isolated.  The minimal
     inhibitory concentration of peptides Cr1, Cr4 and Cr5 was determined against a
range
     of Gram-pos. and Gram-neg. bacteria and showed similar activities to those
     of the bacteriocin peptide, nisin and the antibacterial peptide,
     lactoferricin B against certain Gram-pos. bacteria.  A partially purified
     chymosin digest of sodium caseinate (CrMIX) was prepared and observed to be
     heat stable for up to 15 min on exposure to 121°.  Although CrMIX
     showed bactericidal activity against Salmonella typhimurium in 0.1% (w/v)
     peptone medium, no antibacterial activity was observed when tested in skim
     milk at the same concentration
RE.CNT  29    THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13  ANSWER 3 OF 17  HCAPLUS  COPYRIGHT 2006 ACS on STN
AN   2004:5123  HCAPLUS
DN   140:71022
TI   Casein αS2 peptides with angiotensin I-converting enzyme
     (ACE)-inhibiting activity for the preparation of medicaments and
     foodstuffs for the treatment of hypertension
IN   Tauzin, Jerome; Miclo, Laurent; Lefranc, Catherine; Boudier,
     Jean-Francois; Gaillard, Jean-Luc
PA   Ingredia, Fr.
SO   Eur. Pat. Appl., 19 pp.
     CODEN: EPXXDW
DT   Patent
LA   French
FAN.CNT 1
     PATENT NO.           KIND   DATE        APPLICATION NO.         DATE
     ---------------      ----   --------    --------------------    --------
PI   EP 1374885           A1     20040102    EP 2003-370025          20030624
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
     FR 2841473            A1     20040102    FR 2002-8036            20020627
     FR 2841473            B1     20040917
     CA 2490282            AA     20040108    CA 2003-2490282         20030624
     WO 2004002509         A2     20040108    WO 2003-FR1945          20030624
     WO 2004002509         A3     20040415
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM,
             PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT,
             TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
```

KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2003255691	A1	20040119	AU 2003-255691		20030624
BR 2003012214	A	20050412	BR 2003-12214		20030624
JP 2005530851	T2	20051013	JP 2004-516859		20030624
PRAI FR 2002-8036	A	20020627			
WO 2003-FR1945	W	20030624			

AB The invention discloses peptides derived from casein αS2 with ACE-inhibiting activity for the prevention and treatment of hypertension. The peptides may be included in pharmaceutical compns. and foodstuffs.

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 4 OF 17 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:887281 HCAPLUS
DN 138:105839
TI Electro-membrane filtration for the selective isolation of bioactive peptides from an αs2- casein hydrolysate
AU Bargeman, Gerrald; Houwing, Joukje; Recio, Isidra; Koops, Geert-Henk; Van der Horst, Caroline
CS NIZO Food Research, Ede, 6710 BA, Neth.
SO Biotechnology and Bioengineering (2002), 80(6), 599-609
CODEN: BIBIAU; ISSN: 0006-3592
PB John Wiley & Sons, Inc.
DT Journal
LA English
AB In this study, pos. charged peptides with antimicrobial activity were isolated from an αs2- casein hydrolyzate using batch-wise electro-membrane filtration (EMF). αs2- Casein f(183-207), a peptide with strong antimicrobial activity, predominated in the isolated product and was enriched from 7.5% of the total protein components in the feed to 25% in the permeate product. With conventional membrane diafiltration using the same membrane (GR60PP), isolation of this and other charged bioactive peptides could not be achieved. The economics of EMF are mainly governed by the energy costs and the capital investment, which is affected by the flux of the desired peptide. A maximum average transport rate of αs2- casein f(183-207) during batch-wise EMF of 1.2 g/m2·h was achieved. Results indicate that an increase in the hydrolyzate (feed) concentration, the applied p.d. and the conductivity of the permeate and electrode solns., and a reduction in the conductivity of the feed result in a higher transport rate of αs2- casein f(183-207). This is in line with the expectation that the transport rate is improved when the concentration, the elec. field strength, or the electrophoretic mobility is increased, provided that the electrophoretic transport predominates. The expected energy consumption of the EMF process per g of peptide transported was reduced by approx. 50% by applying a low overall p.d. and by processing desalinated hydrolyzate. Considerable improvements in transport rate, energy efficiency, and process economics seem to be attainable by addnl. optimization of the process parameters and the EMF module design.

RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 5 OF 17 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:839514 HCAPLUS
DN 138:362404
TI Angiotensin-I-converting enzyme inhibitory peptides from tryptic hydrolysate of bovine αS2- casein
AU Tauzin, Jerome; Miclo, Laurent; Gaillard, Jean-Luc
CS Laboratoire des BioSciences de l'Aliment, Faculte des Sciences et Techniques, UC 885 INRA, Universite Henri Poincare Nancy 1, Vandoeuvre-les-Nancy, 54506, Fr.
SO FEBS Letters (2002), 531(2), 369-374
CODEN: FEBLAL; ISSN: 0014-5793
PB Elsevier Science B.V.
DT Journal
LA English
AB Angiotensin-I-converting enzyme (ACE) inhibitory activity of a tryptic digest of bovine αS2- casein (αS2-CN) was extensively investigated. Forty-three peptide peaks were isolated and tested. Seven casokinins (i.e. CN-derived ACE inhibitory peptides) were identified and their IC50 values were determined Four peptides exhibited an IC50 value lower than 20 μM. Peptides αS2-CN (f174-181) and αS2-CN (f174-179) had IC50 values of 4 μM. Surprisingly, deletion of the C-terminal dipeptide of two of these casokinins did not significantly alter their inhibitory activity.

RE.CNT 50 THERE ARE 50 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 6 OF 17 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:771931 HCAPLUS
DN 138:121522
TI Identification of Sequential IgE-Binding Epitopes on Bovine αs2-Casein in Cow's Milk Allergic Patients
AU Busse, Paula J.; Jaervinen, Kirsi-Marjut; Vila, Leticia; Beyer, Kirsten; Sampson, Hugh A.
CS Jaffe Institute for Food Allergy, Division of Allergy and Immunology, Department of Pediatrics, The Mount Sinai School of Medicine, New York, NY, 10029-6574, USA
SO International Archives of Allergy and Immunology (2002), 129(1), 93-96
CODEN: IAAIEG; ISSN: 1018-2438
PB S. Karger AG
DT Journal
LA English
AB Background: Caseins are the major allergens responsible for cow's milk allergy (CMA). The authors have previously identified the IgE-binding epitopes of the major cow's milk (CM) proteins except for αs2- casein. Methods: Overlapping decapeptides representing the entire length of αs2- casein were synthesized on a cellulose-derivatized membrane. Sera from 13 CM-allergic children, 4-15 yr of age, with a median level of CM-specific IgE >100 kU/l (range 33.7 to > 100 kU/l) were used to identify IgE-binding epitopes. Results: Four major and six minor sequential IgE-binding regions were identified on αs2- casein. The first major region is located in the middle of the protein at amino acids (AA) 83-100, and the other three major regions are located in the carboxy terminal portion of the protein at AA 143-158, 157-172 and 165-188. The minor IgE-binding regions were identified at AA 31-44, 43-56, 93-106, 105-114, 117-128, and 191-200. Conclusion: the authors identified 10 sequential IgE-binding regions on αs2- casein and performed the first crucial step in the development of immunotherapeutic interventions for CMA.

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 7 OF 17 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:758248 HCAPLUS
DN 138:90063
TI The development of electro-membrane filtration for the isolation of bioactive peptides: the effect of membrane selection and operating parameters on the transport rate
AU Bargeman, G.; Koops, G.-H.; Houwing, J.; Breebaart, I.; van der Horst, H. C.; Wessling, M.
CS NIZO Food Research, Ede, 6710 BA, Neth.
SO Desalination (2002), 149(1-3), 369-374

CODEN: DSLNAH; ISSN: 0011-9164
PB Elsevier Science B.V.
DT Journal
LA English
AB The ability to produce functional food ingredients from natural sources becomes increasingly attractive to the food industry. Antimicrobial (bioactive) ingredients, like peptides and proteins, can be isolated from hydrolyzates with membrane filtration and/or chromatog. Electro-membrane filtration (EMF) is an alternative for the isolation of these usually strongly charged components. It is believed to be more selective than membrane filtration and less costly than chromatog. The isolation of bioactive peptides from a hydrolyzate of αs2- casein, a protein originating from milk, was studied as a model separation for the development of EMF. This separation can be used as an example application for the isolation of other charged components from complex feedstocks in several industries. After 4 h EMF the product consisted for 100% of proven or anticipated charged bioactive components. Diffusion and convection were negligible in relation to electrophoretic transport, since only charged components were recovered in the permeate product. The most important peptide (26% on total protein, starting from 7.5% in the feed) was αs2- casein (183-207), a very potent peptide against Gram pos. and Gram neg. microorganisms. The transport rate of αs2-casein (183-207) was reduced strongly when a polysulfone membrane with a mol. weight cut-off below 20 kDa was used. The amount of αs2-casein (183-207) transported increased practically linearly with the concentration and the applied p.d. The use of desalinated feeds to further increase the elec. field strength in the feed compartment resulted in higher transport rates, but this increase was lower than expected probably due to the lower electrophoretic mobility. An average transport rate of 2.5 and 4 g/m2.h at maximum was achieved during 4 h EMF using GR60PP (25 kDa) and GR41PP (100 kDa) membranes, resp.
RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 8 OF 17 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:710628 HCAPLUS
DN 138:169028
TI B-cell epitopes as a screening instrument for persistent cow's milk allergy
AU Jarvinen, Kirsi-Marjut; Beyer, Kirsten; Vila, Leticia; Chatchatee, Pantipa; Busse, Paula J.; Sampson, Hugh A.
CS Division of Pediatric Allergy and Immunology and the Jaffe Institute for Food Allergy, The Mount Sinai School of Medicine, New York, NY, USA
SO Journal of Allergy and Clinical Immunology (2002), 110(2), 293-297
CODEN: JACIBY; ISSN: 0091-6749
PB Mosby, Inc.
DT Journal
LA English
AB The authors sought to assess whether recognition of IgE antibodies of certain epitopes of cow's milk proteins would clearly sep. the patients with life-long cow's milk allergy (CMA) from those who will become clin. tolerant to cow's milk. According to the known IgE-binding regions of cow's milk proteins, 25 decapeptides of αs1- casein, αs2- casein, .vkappa.-casein, α-lactalbumin, and β-lactoglobulin, comprising the core epitopes, were synthesized on a cellulose-derivatized membrane. Sera from 10 patients with persistent CMA and 10 patients who subsequently outgrew their milk allergy were used to investigate the differences in epitope recognition. Five IgE-binding epitopes (2 on αs1- casein, 1 on αs2- casein, and 2 on .vkappa.-casein) were not recognized by any of the patients with transient CMA but showed binding by the majority of the patients with persistent allergy. The presence of IgE antibodies against at least 1 of 3 epitopes (amino acid [AA] 123-132 on αs1- casein, AA 171-180 on αs2-casein, and AA 155-164 on .vkappa.-casein) identified all patients with persistent CMA. The presence of IgE antibodies to distinct allergenic epitopes of cow's milk proteins can be used as a marker of persistent CMA. Prospective studies are needed to investigate the usefulness of these informative epitopes in predicting life-long CMA in young children.
RE.CNT 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 9 OF 17 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:37476 HCAPLUS
DN 136:244141
TI Three oligopeptide-binding proteins are involved in the oligopeptide transport of Streptococcus thermophilus
AU Garault, Peggy; Le Bars, Dominique; Besset, Colette; Monnet, Veronique
CS Unite de Biochimie et Structure des Proteines, Institut National de la Recherche Agronomique, Jouy en Josas, 78352, Fr.
SO Journal of Biological Chemistry (2002), 277(1), 32-39
CODEN: JBCHA3; ISSN: 0021-9258
PB American Society for Biochemistry and Molecular Biology
DT Journal
LA English
AB The functions necessary for bacterial growth strongly depend on the features of the bacteria and the components of the growth media. Our objective was to identify the functions essential to the optimum growth of Streptococcus thermophilus in milk. Using random insertional mutagenesis on a S. thermophilus strain chosen for its ability to grow rapidly in milk, we obtained several mutants incapable of rapid growth in milk. We isolated and characterized one of these mutants in which an amiA1 gene encoding an oligopeptide-binding protein (OBP) was interrupted. This gene was a part of an operon containing all the components of an ATP binding cassette transporter. Three highly homologous amiA genes encoding OBPs work with the same components of the ATP transport system. Their simultaneous inactivation led to a drastic diminution in the growth rate in milk and the absence of growth in chemical defined medium containing peptides as the nitrogen source. We constructed single and multiple neg. mutants for AmiAs and cell wall proteinase (PrtS), the only proteinase capable of hydrolyzing casein oligopeptides outside the cell. Growth expts. in chemical defined medium containing peptides indicated that AmiA1, AmiA2, and AmiA3 exhibited overlapping substrate specificities, and that the whole system allows the transport of peptides containing from 3 to 23 residues.
RE.CNT 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 10 OF 17 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1999:600993 HCAPLUS
DN 131:296772
TI Identification of two distinct antibacterial domains within the sequence of bovine αs2- casein
AU Recio, Isidra; Visser, Servaas
CS Department of Product Technology, Section of Structure and Functionality, NIZO food research, Ede, 6710 BA, Neth.
SO Biochimica et Biophysica Acta, General Subjects (1999), 1428(2-3), 314-326
CODEN: BBGSB3; ISSN: 0304-4165
PB Elsevier B.V.
DT Journal
LA English
AB Two distinct domains with antibacterial activity were isolated from a peptic hydrolyzate of bovine αs2- casein. The digested αs2- casein was fractionated by cation-exchange chromatog., after which the peptides in the two active fractions obtained were separated by high-performance liquid chromatog. and sequenced by electrospray-

ionization tandem mass spectrometry. The major component in each active fraction, f(183-207) and f(164-179), was further purified and the antibacterial activity of these components was tested against several microorganisms. Depending on the target bacterial strain, these peptides exhibited min. inhibitory concns. between 8 and 99 μM. Peptide f(183-207) exhibited a consistently higher antibacterial activity than f(164-179), although both peptides showed a comparable hemolytic effect. A method of in situ enzymic hydrolysis on a cation-exchange membrane to obtain a fraction enriched in the most active antibacterial domain is presented. The antibacterial and hemolytic activities are discussed in relation to the structure and hydrophobicity of the peptides.

RE.CNT 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 11 OF 17 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1996:452327 HCAPLUS
DN 125:123676
TI Purification of antibacterial peptides from bovine milk
IN Zucht, Hans-Dieter; Forssmann, Wolf-Georg; Raida, Manfred; Adermann, Knut
PA Germany
SO Ger. Offen., 17 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI DE 4444753	A1	19960620	DE 1994-4444753	19941215
DE 4444753	C2	19980806		
WO 9735877	A1	19971002	WO 1996-EP1296	19960325
W: AL, AM, AU, BB, BG, BR, CA, CN, CZ, EE, GE, HU, IS, JP, KG, KP, KR, LK, LR, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, TR, TT, UA, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9653342	A1	19971017	AU 1996-53342	19960325
EP 889902	A1	19990113	EP 1996-910013	19960325
EP 889902	B1	20010620		
R: AT, CH, DE, ES, FR, GB, IT, LI				
JP 2000507941	T2	20000627	JP 1997-533956	19960325
AT 202363	E	20010715	AT 1996-910013	19960325
ES 2159021	T3	20010916	ES 1996-910013	19960325
US 2002025928	A1	20020228	US 1998-155203	19980924
US 6579849	B2	20030617		
PRAI DE 1994-4444753		19941215		
WO 1996-EP1296	W	19960325		

AB Fragments of αs2- casein, designated as casobiotics, are present in large amts. in bovine milk and show antibacterial activity against Escherichia coli. Thus, milk was acidified, heated, treated with CaCl2, and centrifuged, and the whey was subjected to cation-exchange chromatog. and 3 cycles of HPLC to isolate αs2- casein (165-203). The structure and biol. activity of this peptide were confirmed by synthesis. A related peptide, αs2- casein (166-203), was also prepared and showed similar biol. activity.

L13 ANSWER 12 OF 17 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1995:957680 HCAPLUS
DN 124:3426
TI Calmodulin-binding peptides isolated from α- casein peptone
AU Kizawa, Kenji; Naganuma, Keiko; Murakami, Umeji
CS Biochem. Lab., Kanebo Ltd., Odawara, 250, Japan
SO Journal of Dairy Research (1995), 62(4), 587-92
CODEN: JDRSAN; ISSN: 0022-0299
PB Cambridge University Press
DT Journal
LA English
AB Peptides that inhibit calmodulin-dependent cyclic nucleotide phosphodiesterase were isolated from a pepsin digest of α-casein. Anal. of these peptides showed that they corresponded to the αs2- casein sequences 164-179 (Leu-Lys-Lys Ile-Ser-Gln-Arg-Tyr-Gln-Lys-Phe-Ala-Leu-Pro-Gln-Tyr), 183-206 (Val-Tyr-Gln-His-Gln-Lys-Ala-Met-Lys-Pro-Trp-Ile-Gln-Pro-Lys-Thr-Lys-Val-Ile-Pro-Tyr-Val-Arg-Tyr) and 183-207 (C-terminus, Val-Tyr-Gln-His-Gln-Lys-Ala-Met-Lys-Pro-Trp-Ile-Gln-Pro-Lys-Thr-Lys-Val-Ile-Pro-Tyr-Val-Arg-Tyr-Leu). These peptides inhibited calmodulin-induced cyclic nucleotide phosphodiesterase activity over the range 1-50 μM without affecting the basal enzyme activity. These results demonstrated that the affinities of these peptides for calmodulin are comparable to the affinities of certain endogenous neurohormones and proteins that interact with calmodulin.

L13 ANSWER 13 OF 17 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1995:847173 HCAPLUS
DN 123:333116
TI Casocidin-I: a casein-αs2 derived peptide exhibits antibacterial activity
AU Zucht, Hans-Dieter; Raida, Manfred; Adermann, Knut; Maegert, Hans-Juergen; Forssmann, Wolf-Georg
CS Niedersaechsisches Institut fuer Peptid-Forschung (IPF), Feodor-Lynen-Strasse 31, Hannover, D-30625, Germany
SO FEBS Letters (1995), 372(2,3), 185-8
CODEN: FEBLAL; ISSN: 0014-5793
PB Elsevier
DT Journal
LA English
AB Here we report the isolation and characterization of an antibacterial peptide from bovine milk inhibiting the growth of Escherichia coli and Staphylococcus carnosus. The primary structure of the peptide was revealed as a 39-amino-acid-containing fragment of bovine αs2-casein (position 165-203) by means of Edman amino acid sequencing and mass spectrometry. Since human milk does not contain any casein-αs2, these findings could explain the different influence of human and bovine milk on the gastrointestinal flora of the suckling.

L13 ANSWER 14 OF 17 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1992:150149 HCAPLUS
DN 116:150149
TI Platelet aggregation-inhibiting hexadecapeptide from pepsin hydrolyzates of casein
IN Kizawa, Kenji; Naganuma, Keiko; Murakami, Umeji; Takemoto, Taira
PA Kanebo, Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 03255094	A2	19911113	JP 1990-52553	19900302
PRAI JP 1990-52553		19900302		

AB H-Leu-Lys-Lys-Ile-Ser-Gln-Arg-Tyr-Gln-Lys-Phe-Ala-Leu-Pro-Gln-Tyr-OH (I) or its salts are isolated from pepsin hydrolyzates of α-casein. I inhibits blood platelet aggregation and is useful for treatment and prevention of thrombosis. α- Casein (10 g) in aqueous HCl was treated with pepsin at 37° for 1 h and applied to column chromatog. to give 35.0 mg I trifluoroacetate salt. I trifluoroacetate salt inhibited ADP-induced aggregation of platelet-rich

plasma with IC50 of 3358 μM.

L13 ANSWER 15 OF 17 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1989:611264 HCAPLUS
DN 111:211264
TI Application of reversed-phase high-performance liquid chromoatography to the separation of peptides from phosphorylated and dephosphorylated casein hydrolyzates
AU Lemieux, Lise; Amiot, Jean
CS Dep. Sci. Technol. Aliments, STELA, Sainte-Foy, QC, G1K 7P4, Can.
SO Journal of Chromatography (1989), 473(1), 189-206
CODEN: JOCRAM; ISSN: 0021-9673
DT Journal
LA English
AB Peptides from phosphorylated and dephosphorylated casein hydrolyzates were fractionated on a TSK G2000SW size-exclusion column. The fractionated peptides were separated by reversed-phase HPLC on a C18 column using aqueous trifluoroacetic acid as the mobile phase and acetonitrile as the mobile phase modifier in the linear gradient elution system. The separation of the dephosphorylated and phosphorylated hydrolyzates gave 213 and 187 peptides, resp., of which 116 and 99, resp., were reported. A study of their composition and retention times verified that the peptide separation mechanism includes ionic interactions, H bonding and peptide characteristics, in addition to overall peptide hydrophobicity.

L13 ANSWER 16 OF 17 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1977:417534 HCAPLUS
DN 87:17534
TI Complete amino acid sequence of bovine αS2- casein
AU Brignon, Ghislaine; Ribadeau Dumas, Bruno; Mercier, Jean Claude; Pelissier, Jean Pierre; Das, B. C.
CS Lab. Rech. Proteines, Inst. Natl. Rech. Agron., Jouy-en-Josas, Fr.
SO FEBS Letters (1977), 76(2), 274-9
CODEN: FEBLAL; ISSN: 0014-5793
DT Journal
LA English
AB The complete primary amino acid sequence of bovine αS2-casein was determined by standard methods. In addition, the possible sites of phosphorylation on this protein were localized. This protein contains 207 amino acid residues, including 2 cysteines, and 10-13 phosphate groups and has a calculated mol. weight of 25,150-15,390 daltons.

L13 ANSWER 17 OF 17 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1970:519353 HCAPLUS
DN 73:119353
TI Isolation of bitter peptides from tryptic hydrolyzate of casein and their chemical structure
AU Matoba, Teruyoshi; Hayashi, Rikimaru; Hata, Tadao
CS Res. Inst. Food Sci., Kyoto Univ., Kyoto, Japan
SO Agricultural and Biological Chemistry (1970), 34(8), 1235-43
CODEN: ABCHA6; ISSN: 0002-1369
DT Journal
LA English
AB Three bitter peptides were isolated from the tryptic hydrolyzate of casein by extraction with BuOH, precipitation at pH 5.4, gel filtration with Sephadex G-25, chromatog. on Dowex 50, and paper chromatog. The primary structures of the peptides were: Gly-Pro-Phe-Pro-Val-Ileu, Phe-Phe-Val-Ala-Pro-Phe-Pro-Glu-Val-Phe-Gly-Lys, and Phe-Ala-Leu-Pro-Gln-Tyr-Leu-Lys.

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(FILE 'HOME' ENTERED AT 14:31:21 ON 08 AUG 2006)

FILE 'REGISTRY' ENTERED AT 14:31:44 ON 08 AUG 2006
L1 1 S NMAINPSK/SQEP
L2 4 S NMAINPSK/SQSP
L3 1 S FALPQY/SQEP
L4 65 S FALPQY/SQSP
L5 1 S FPQYLQY/SQEP
L6 30 S FPQYLQY/SQSP

FILE 'HCAPLUS' ENTERED AT 14:34:35 ON 08 AUG 2006
L7 3 S L1
L8 6 S L2
L9 2 S L3
L10 66 S L4
L11 3 S L5
L12 16 S L6
L13 17 S L4 AND CASEIN

=> s l6 and casein
16 L6
60044 CASEIN
24638 CASEINS
66633 CASEIN
(CASEIN OR CASEINS)
L14 16 L6 AND CASEIN

=> d l14 1-6 bib abs

L14 ANSWER 1 OF 16 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:573884 HCAPLUS
DN 143:282366
TI The specificity of oligopeptide transport by Streptococcus thermophilus resembles that of Lactococcus lactis and not that of pathogenic streptococci
AU Juille, Odile; Le Bars, Dominique; Juillard, Vincent
CS Unite de Biochimie et Structure des Proteines, Institut National de la Recherche Agronomique, Centre de Recherches de Jouy-en-Josas, Jouy-en-Josas, 78352, Fr.
SO Microbiology (Reading, United Kingdom) (2005), 151(6), 1987-1994
CODEN: MROBEO; ISSN: 1350-0872
PB Society for General Microbiology
DT Journal
LA English
AB Peptide transport is a crucial step in the growth of S. thermophilus in protein- or peptide-containing media. The objective of the present work was to determine the specificity of peptide utilization by this widely used lactic acid bacterium. To reach that goal, complementary approaches were employed. The capability of a proteinase-neg. S. thermophilus strain to grow in a chemical defined medium containing a mixture of peptides isolated from milk as the source of amino acids was analyzed. Peptides were separated into 3 size classes by ultrafiltration. The strain was able to use peptides up to 3.5 kDa during growth, as revealed by liquid chromatog. and mass spectrometry analyses. The same strain was grown in chemical defined medium containing a tryptic digest of casein, and the resp. time-course consumption of the peptides during growth was estimated The ability to consume large peptides (≤23 residues) was confirmed, as long as they are cationic and hydrophobic. These results were confirmed by peptide transport studies. Extension of the study to 11 other strains revealed that they all shared these preferences.
RE.CNT 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 2 OF 16 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:5123 HCAPLUS
DN 140:71022
TI Casein αS2 peptides with angiotensin I-converting enzyme (ACE)-inhibiting activity for the preparation of medicaments and foodstuffs for the treatment of hypertension
IN Tauzin, Jerome; Miclo, Laurent; Lefranc, Catherine; Boudier, Jean-Francois; Gaillard, Jean-Luc
PA Ingredia, Fr.
SO Eur. Pat. Appl., 19 pp.
CODEN: EPXXDW
DT Patent
LA French
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI EP 1374885	A1	20040102	EP 2003-370025	20030624
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
FR 2841473	A1	20040102	FR 2002-8036	20020627
FR 2841473	B1	20040917		
CA 2490282	AA	20040108	CA 2003-2490282	20030624
WO 2004002509	A2	20040108	WO 2003-FR1945	20030624
WO 2004002509	A3	20040415		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003255691	A1	20040119	AU 2003-255691	20030624
BR 2003012214	A	20050412	BR 2003-12214	20030624
JP 2005530851	T2	20051013	JP 2004-516859	20030624
PRAI FR 2002-8036	A	20020627		
WO 2003-FR1945	W	20030624		

AB The invention discloses peptides derived from casein αS2 with ACE-inhibiting activity for the prevention and treatment of hypertension. The peptides may be included in pharmaceutical compns. and foodstuffs.
RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 3 OF 16 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2003:509734 HCAPLUS
DN 140:241
TI Bioactive peptides from tryptic hydrolysate of bovine αS2-casein
AU Tauzin, Jerome; Miclo, Laurent; Roth, Stephane; Spiesser, Estelle; Molle, Daniel; Gaillard, Jean-Luc
CS Laboratoire des BioSciences de l'Aliment, Faculte des Sciences, UA INRA 885, Vandoeuvre-les-Nancy, 54500, Fr.
SO Peptides 2000, Proceedings of the European Peptide Symposium, 26th, Montpellier, France, Sept. 10-15, 2000 (2001), Meeting Date 2000, 755-756. Editor(s): Martinez, Jean; Fehrentz, Jean-Alain. Publisher: Editions EDK, Paris, Fr.
CODEN: 69EDWK; ISBN: 2-84254-048-4
DT Conference
LA English
AB Bovine αS2- casein was subjected to tryptic hydrolysis. Generated peptides had angiotensin I-converting enzyme inhibitory activity and μ and δ opioid receptor binding activities.
RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 4 OF 16 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:839514 HCAPLUS
DN 138:362404
TI Angiotensin-I-converting enzyme inhibitory peptides from tryptic hydrolysate of bovine αS2- casein
AU Tauzin, Jerome; Miclo, Laurent; Gaillard, Jean-Luc
CS Laboratoire des BioSciences de l'Aliment, Faculte des Sciences et Techniques, UC 885 INRA, Universite Henri Poincare Nancy 1, Vandoeuvre-les-Nancy, 54506, Fr.
SO FEBS Letters (2002), 531(2), 369-374
CODEN: FEBLAL; ISSN: 0014-5793
PB Elsevier Science B.V.
DT Journal
LA English
AB Angiotensin-I-converting enzyme (ACE) inhibitory activity of a tryptic digest of bovine αS2- casein (αS2-CN) was extensively investigated. Forty-three peptide peaks were isolated and tested. Seven casokinins (i.e. CN-derived ACE inhibitory peptides) were identified and their IC50 values were determined Four peptides exhibited an IC50 value lower than 20 μM. Peptides αS2-CN (f174-181) and αS2-CN (f174-179) had IC50 values of 4 μM. Surprisingly, deletion of the C-terminal dipeptide of two of these casokinins did not significantly alter their inhibitory activity.
RE.CNT 50 THERE ARE 50 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 5 OF 16 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:771931 HCAPLUS
DN 138:121522
TI Identification of Sequential IgE-Binding Epitopes on Bovine αs2-Casein in Cow's Milk Allergic Patients
AU Busse, Paula J.; Jaervinen, Kirsi-Marjut; Vila, Leticia; Beyer, Kirsten; Sampson, Hugh A.
CS Jaffe Institute for Food Allergy, Division of Allergy and Immunology, Department of Pediatrics, The Mount Sinai School of Medicine, New York, NY, 10029-6574, USA
SO International Archives of Allergy and Immunology (2002), 129(1), 93-96
CODEN: IAAIEG; ISSN: 1018-2438
PB S. Karger AG
DT Journal
LA English
AB Background: Caseins are the major allergens responsible for cow's milk allergy (CMA). The authors have previously identified the IgE-binding epitopes of the major cow's milk (CM) proteins except for αs2- casein. Methods: Overlapping decapeptides representing the entire length of αs2- casein were synthesized on a cellulose-derivatized membrane. Sera from 13 CM-allergic children, 4-15 yr of age, with a median level of CM-specific IgE >100 kU/l (range 33.7 to > 100 kU/l) were used to identify IgE-binding epitopes. Results: Four major and six minor sequential IgE-binding regions were identified on αs2- casein. The first major region is located in the middle of the protein at amino acids (AA) 83-100, and the other three major regions are located in the carboxy terminal portion of the protein at AA 143-158, 157-172 and 165-188. The minor IgE-binding regions were identified at AA 31-44, 43-56, 93-106, 105-114, 117-128, and 191-200. Conclusion: the authors identified 10 sequential IgE-binding regions on αs2- casein and performed the first crucial step in the development of immunotherapeutic interventions for CMA.
RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 6 OF 16 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:758248 HCAPLUS
DN 138:90063
TI The development of electro-membrane filtration for the isolation of bioactive peptides: the effect of membrane selection and operating parameters on the transport rate
AU Bargeman, G.; Koops, G.-H.; Houwing, J.; Breebaart, I.; van der Horst, H. C.; Wessling, M.
CS NIZO Food Research, Ede, 6710 BA, Neth.
SO Desalination (2002), 149(1-3), 369-374
CODEN: DSLNAH; ISSN: 0011-9164
PB Elsevier Science B.V.
DT Journal
LA English
AB The ability to produce functional food ingredients from natural sources becomes increasingly attractive to the food industry. Antimicrobial (bioactive) ingredients, like peptides and proteins, can be isolated from hydrolyzates with membrane filtration and/or chromatog. Electro-membrane filtration (EMF) is an alternative for the isolation of these usually strongly charged components. It is believed to be more selective than membrane filtration and less costly than chromatog. The isolation of bioactive peptides from a hydrolyzate of αs2- casein, a protein originating from milk, was studied as a model separation for the development of EMF. This separation can be used as an example application for the isolation of other charged components from complex feedstocks in several industries. After 4 h EMF the product consisted for 100% of proven or anticipated charged bioactive components. Diffusion and convection were negligible in relation to electrophoretic transport, since only charged components were recovered in the permeate product. The most important peptide (26% on total protein, starting from 7.5% in the feed) was αs2- casein (183-207), a very potent peptide against Gram pos. and Gram neg. microorganisms. The transport rate of αs2-casein (183-207) was reduced strongly when a polysulfone membrane with a mol. weight cut-off below 20 kDa was used. The amount of αs2-casein (183-207) transported increased practically linearly with the concentration and the applied p.d. The use of desalinated feeds to further increase the elec. field strength in the feed compartment resulted in higher transport rates, but this increase was lower than expected probably due to the lower electrophoretic mobility. An average transport rate of 2.5 and 4 g/m2.h at maximum was achieved during 4 h EMF using GR60PP (25 kDa) and GR41PP (100 kDa) membranes, resp.
RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d l14 1-16 bib abs

L14 ANSWER 1 OF 16 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:573884 HCAPLUS
DN 143:282366
TI The specificity of oligopeptide transport by Streptococcus thermophilus resembles that of Lactococcus lactis and not that of pathogenic streptococci
AU Juille, Odile; Le Bars, Dominique; Juillard, Vincent
CS Unite de Biochimie et Structure des Proteines, Institut National de la Recherche Agronomique, Centre de Recherches de Jouy-en-Josas, Jouy-en-Josas, 78352, Fr.
SO Microbiology (Reading, United Kingdom) (2005), 151(6), 1987-1994
CODEN: MROBEO; ISSN: 1350-0872
PB Society for General Microbiology
DT Journal
LA English
AB Peptide transport is a crucial step in the growth of S. thermophilus in protein- or peptide-containing media. The objective of the present work was to determine the specificity of peptide utilization by this widely used lactic acid bacterium. To reach that goal, complementary approaches were employed. The capability of a proteinase-neg. S. thermophilus strain to grow in a chemical defined medium containing a mixture of peptides isolated from milk as the source of amino acids was analyzed. Peptides were separated into 3 size classes by ultrafiltration. The strain was able to use peptides up to 3.5 kDa during growth, as revealed by liquid chromatog. and mass spectrometry analyses. The same strain was grown in chemical defined medium containing a tryptic digest of casein, and the resp. time-course consumption of the peptides during growth was estimated The ability to consume large peptides (≤23 residues) was confirmed, as long as they are cationic and hydrophobic. These results were confirmed by peptide transport studies. Extension of the study to 11 other strains revealed that they all shared these preferences.
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L14 ANSWER 2 OF 16 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:5123 HCAPLUS
DN 140:71022
TI Casein αS2 peptides with angiotensin I-converting enzyme (ACE)-inhibiting activity for the preparation of medicaments and foodstuffs for the treatment of hypertension
IN Tauzin, Jerome; Miclo, Laurent; Lefranc, Catherine; Boudier, Jean-Francois; Gaillard, Jean-Luc
PA Ingredia, Fr.
SO Eur. Pat. Appl., 19 pp.
CODEN: EPXXDW
DT Patent
LA French
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1374885	A1	20040102	EP 2003-370025	20030624
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	FR 2841473	A1	20040102	FR 2002-8036	20020627
	FR 2841473	B1	20040917		
	CA 2490282	AA	20040108	CA 2003-2490282	20030624
	WO 2004002509	A2	20040108	WO 2003-FR1945	20030624
	WO 2004002509	A3	20040415		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2003255691	A1	20040119	AU 2003-255691	20030624
	BR 2003012214	A	20050412	BR 2003-12214	20030624
	JP 2005530851	T2	20051013	JP 2004-516859	20030624
PRAI	FR 2002-8036	A	20020627		
	WO 2003-FR1945	W	20030624		

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DN 140:241
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AU Tauzin, Jerome; Miclo, Laurent; Roth, Stephane; Spiesser, Estelle; Molle, Daniel; Gaillard, Jean-Luc
CS Laboratoire des BioSciences de l'Aliment, Faculte des Sciences, UA INRA 885, Vandoeuvre-les-Nancy, 54500, Fr.
SO Peptides 2000, Proceedings of the European Peptide Symposium, 26th, Montpellier, France, Sept. 10-15, 2000 (2001), Meeting Date 2000, 755-756. Editor(s): Martinez, Jean; Fehrentz, Jean-Alain. Publisher: Editions EDK, Paris, Fr.
CODEN: 69EDWK; ISBN: 2-84254-048-4
DT Conference
LA English
AB Bovine αS2- casein was subjected to tryptic hydrolysis. Generated peptides had angiotensin I-converting enzyme inhibitory activity and μ and δ opioid receptor binding activities.
RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
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L14 ANSWER 4 OF 16 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:839514 HCAPLUS
DN 138:362404
TI Angiotensin-I-converting enzyme inhibitory peptides from tryptic hydrolysate of bovine αS2- casein
AU Tauzin, Jerome; Miclo, Laurent; Gaillard, Jean-Luc
CS Laboratoire des BioSciences de l'Aliment, Faculte des Sciences et Techniques, UC 885 INRA, Universite Henri Poincare Nancy 1, Vandoeuvre-les-Nancy, 54506, Fr.
SO FEBS Letters (2002), 531(2), 369-374
CODEN: FEBLAL; ISSN: 0014-5793
PB Elsevier Science B.V.
DT Journal
LA English
AB Angiotensin-I-converting enzyme (ACE) inhibitory activity of a tryptic digest of bovine αS2- casein (αS2-CN) was extensively investigated. Forty-three peptide peaks were isolated and tested. Seven casokinins (i.e. CN-derived ACE inhibitory peptides) were identified and their IC50 values were determined Four peptides exhibited an IC50 value lower than 20 μM. Peptides αS2-CN (f174-181) and αS2-CN (f174-179) had IC50 values of 4 μM. Surprisingly, deletion of the C-terminal dipeptide of two of these casokinins did not significantly alter their inhibitory activity.
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L14 ANSWER 5 OF 16 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:771931 HCAPLUS
DN 138:121522
TI Identification of Sequential IgE-Binding Epitopes on Bovine αs2-Casein in Cow's Milk Allergic Patients
AU Busse, Paula J.; Jaervinen, Kirsi-Marjut; Vila, Leticia; Beyer, Kirsten; Sampson, Hugh A.
CS Jaffe Institute for Food Allergy, Division of Allergy and Immunology, Department of Pediatrics, The Mount Sinai School of Medicine, New York, NY, 10029-6574, USA
SO International Archives of Allergy and Immunology (2002), 129(1), 93-96
CODEN: IAAIEG; ISSN: 1018-2438
PB S. Karger AG
DT Journal
LA English
AB Background: Caseins are the major allergens responsible for cow's milk allergy (CMA). The authors have previously identified the IgE-binding epitopes of the major cow's milk (CM) proteins except for αs2- casein. Methods: Overlapping decapeptides representing the entire length of αs2- casein were synthesized on a cellulose-derivatized membrane. Sera from 13 CM-allergic children, 4-15 yr of age, with a median level of CM-specific IgE >100 kU/l (range 33.7 to > 100 kU/l) were used to identify IgE-binding epitopes. Results: Four major and six minor sequential IgE-binding regions were identified on αs2- casein. The first major region is located in the middle of the protein at amino acids (AA) 83-100, and the other three major regions are located in the carboxy terminal portion of the protein at AA 143-158, 157-172 and 165-188. The minor IgE-binding regions were identified at AA 31-44, 43-56, 93-106, 105-114, 117-128, and 191-200. Conclusion: the authors identified 10 sequential IgE-binding regions on αs2- casein and performed the first crucial step in the development of immunotherapeutic interventions for CMA.
RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
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L14 ANSWER 6 OF 16 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:758248 HCAPLUS
DN 138:90063
TI The development of electro-membrane filtration for the isolation of bioactive peptides: the effect of membrane selection and operating parameters on the transport rate
AU Bargeman, G.; Koops, G.-H.; Houwing, J.; Breebaart, I.; van der Horst, H. C.; Wessling, M.
CS NIZO Food Research, Ede, 6710 BA, Neth.
SO Desalination (2002), 149(1-3), 369-374
CODEN: DSLNAH; ISSN: 0011-9164
PB Elsevier Science B.V.
DT Journal
LA English
AB The ability to produce functional food ingredients from natural sources becomes increasingly attractive to the food industry. Antimicrobial (bioactive) ingredients, like peptides and proteins, can be isolated from hydrolyzates with membrane filtration and/or chromatog. Electro-membrane filtration (EMF) is an alternative for the isolation of these usually strongly charged components. It is believed to be more selective than membrane filtration and less costly than chromatog. The isolation of bioactive peptides from a hydrolyzate of αs2- casein, a protein originating from milk, was studied as a model separation for the development of EMF. This separation can be used as an example application for the isolation of other charged components from complex feedstocks in several industries. After 4 h EMF the product consisted for 100% of proven or anticipated charged bioactive components. Diffusion and convection were negligible in relation to electrophoretic transport, since only charged components were recovered in the permeate product. The most important peptide (26% on total protein, starting from 7.5% in the feed) was αs2- casein (183-207), a very potent peptide against Gram pos. and Gram neg. microorganisms. The transport rate of αs2-casein (183-207) was reduced strongly when a polysulfone membrane with a mol. weight cut-off below 20 kDa was used. The amount of αs2-casein (183-207) transported increased practically linearly with the concentration and the applied p.d. The use of desalinated feeds to further increase the elec. field strength in the feed compartment resulted in higher transport rates, but this increase was lower than expected probably due to the lower electrophoretic mobility. An average transport rate of 2.5 and 4 g/m2.h at maximum was achieved during 4 h EMF using GR60PP (25 kDa) and GR41PP (100 kDa) membranes, resp.
RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 7 OF 16 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2002:52829 HCAPLUS
DN 137:196485
TI Molecular genetic characterization of the goat αS2- casein E allele
AU Lagonigro, R.; Pietrola, E.; D'Andrea, M.; Veltri, C.; Pilla, F.
CS Dipartimento di Scienze Animali Vegetali e dell' Ambiente, Universita del Molise, Campobasso, Italy
SO Animal Genetics (2001), 32(6), 391-393
CODEN: ANGEE3; ISSN: 0268-9146
PB Blackwell Science Ltd.
DT Journal
LA English
AB As2 casein is one of the major protein of ruminants milk, and in goats, four alleles have already been described at the DNA level. DNA was extracted from whole blood of a goat specimen showing a homozygous E pattern to detect the mutation determining the phenotypic variant. All 18 exons of the αs2 gene were amplified and sequenced, using primers selected according to the bovine intronic sequence. A mutation was identified at the eighty-third base of the exon 16, where cytosine was replaced by a guanine. In the encoded E protein variant, a proline replaced by an arginine in position 197 of the mature protein. The sequence of the amplified cDNA confirmed that the E allele presented a nucleotide substitution in the eighty-third base of the exon 16.
RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 8 OF 16 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:37476 HCAPLUS
DN 136:244141
TI Three oligopeptide-binding proteins are involved in the oligopeptide transport of Streptococcus thermophilus
AU Garault, Peggy; Le Bars, Dominique; Besset, Colette; Monnet, Veronique
CS Unite de Biochimie et Structure des Proteines, Institut National de la Recherche Agronomique, Jouy en Josas, 78352, Fr.
SO Journal of Biological Chemistry (2002), 277(1), 32-39
CODEN: JBCHA3; ISSN: 0021-9258
PB American Society for Biochemistry and Molecular Biology
DT Journal
LA English
AB The functions necessary for bacterial growth strongly depend on the features of the bacteria and the components of the growth media. Our objective was to identify the functions essential to the optimum growth of Streptococcus thermophilus in milk. Using random insertional mutagenesis on a S. thermophilus strain chosen for its ability to grow rapidly in milk, we obtained several mutants incapable of rapid growth in milk. We isolated and characterized one of these mutants in which an amiA1 gene encoding an oligopeptide-binding protein (OBP) was interrupted. This gene was a part of an operon containing all the components of an ATP binding cassette transporter. Three highly homologous amiA genes encoding OBPs work with the same components of the ATP transport system. Their simultaneous inactivation led to a drastic diminution in the growth rate in milk and the absence of growth in chemical defined medium containing peptides as the nitrogen source. We constructed single and multiple neg. mutants for AmiAs and cell wall proteinase (PrtS), the only proteinase capable of hydrolyzing casein oligopeptides outside the cell. Growth expts. in chemical defined medium containing peptides indicated that AmiA1, AmiA2, and AmiA3 exhibited overlapping substrate specificities, and that the whole system allows the transport of peptides containing from 3 to 23 residues.
RE.CNT 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 9 OF 16 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:31272 HCAPLUS
DN 136:107509
TI α- Casein peptide composition for retarding aging of the skin and treating periodontal disease
IN Smith, John Arthur
PA Pepsyn Ltd., UK
SO PCT Int. Appl., 27 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002002133	A2	20020110	WO 2001-GB2601	20010613
	WO 2002002133	A3	20021017		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	CA 2412836	AA	20020110	CA 2001-2412836	20010613
	EP 1317274	A2	20030611	EP 2001-938424	20010613
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	JP 2004501976	T2	20040122	JP 2002-506754	20010613
	US 2004014653	A1	20040122	US 2003-312698	20030618
PRAI	GB 2000-16189	A	20000630		
	WO 2001-GB2601	W	20010613		

AB Provided is use of a peptide, or a derivative of a peptide, in the manufacture of a medicament effective in alleviating or preventing periodontal disease, wherein the peptide comprises an amino acid sequence present in an α-S2 casein precursor, said sequence comprising 3 or more amino acids, and not comprising at its N-terminus the N-terminal amino acid of the full α-S2 casein precursor. The peptide may alternatively be any peptide having an α-S2 casein fragment activity. Further provided is use of a peptide, or a derivative of a peptide, in the manufacture of a medicament effective in alleviating or preventing an effect of aging in skin, wherein the peptide comprises an amino acid sequence present in an α-S2 casein precursor, said sequence comprising 3 or more amino acids, and not comprising at its N-terminus the N-terminal amino acid of the full α-S2 casein precursor. The peptide may alternatively be any peptide having an α-S2 casein fragment activity.

L14 ANSWER 10 OF 16 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2000:29682 HCAPLUS
DN 132:219990
TI Casein related amyloid, characterization of a new and unique amyloid protein isolated from bovine corpora amylacea
AU Niewold, Theodoor A.; Murphy, Charles L.; Hulskamp-Koch, Claartje A. M.; Tooten, Peter C. J.; Gruys, Erik
CS Institute for Animal Science and Health (ID-DLO), Lelystad, NL-8200 AB, Neth.
SO Amyloid (1999), 6(4), 244-249
CODEN: AIJIET; ISSN: 1350-6129
PB Parthenon Publishing Group
DT Journal
LA English
AB Amyloid bodies can be found in mammary secretory tissue of various

species. These corpora amylacea (CA) have a lamellated structure, contain amyloid fibrils and are predominantly located in the alveolar lumina. The nature of the amyloid was not known, but CA were suggested to originate either from milk casein or mammary alveolar epithelial keratin. In the present report, bovine CA were analyzed histochem. Furthermore, CA were isolated, analyzed and the amyloid was purified and characterized by amino acid sequencing. CA amyloid appeared to be potassium permanganate sensitive and tryptophan pos., and in this respect different from most other amyloid types except for AA and β-2 microglobulin amyloid. Gel filtration of purified amyloid fibrils showed a HMW peak and a major 4 kDa peak. N-terminal amino acid sequencing showed the amyloid to consist of tryptic-like peptides with an unusually high content of amino acids with bulky side chains. The amyloid protein was identified as derived from α-S2- casein. The fragments are of varying length (32, 33 and 45 amino acids), but all start at position 81 of α-S2- casein. We have identified a new and unique amyloid protein, and we propose to designate it as according to the guidelines for amyloid nomenclature.

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ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 11 OF 16 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1995:71228 HCAPLUS
DN 122:284799
TI Biochemical and genetic analysis of variant C of caprine αs2- casein (Capra hircus)
AU Bouniol, C.; Brignon, G.; Mahe, M F.; Printz, C.
CS Unite de developpement concertee INSERM U-310-INRA Station 806, Institut de Biologie Physico-chimique, Paris, 75005, Fr.
SO Animal Genetics (1994), 25(3), 173-7
CODEN: ANGEE3; ISSN: 0268-9146
DT Journal
LA English
AB Two alleles, A and B, were previously described at the goat αs2- casein locus. Isoelec. focusing allowed the us to subdivide the former one in two new alleles, called A and C. Although αs2- casein C cannot actually be distinguished from its A counterpart by starch or PAGE, it differs from the previous allele by a single substitution Lys (A)/Ile (C) at position 167, which was confirmed at the nucleotide level. The frequencies of the three αs2- casein alleles A, B and C were estimated to be 0.85, 0.04 and 0.11 in the French dairy breeds "Alpine" and "Saanen".

L14 ANSWER 12 OF 16 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1994:210960 HCAPLUS
DN 120:210960
TI Characterization of goat allelic αs2- caseins A and B: Further evidence of the phosphorylation code of caseins
AU Bouniol, Christine; Brignon, Ghislaine; Mahe, Marie-Francoise; Printz, Christiane
CS Lab. Genet. Biochim., INRA, Jouy-en-Josas, F-78352, Fr.
SO Protein Sequences & Data Analysis (1993), 5(5), 213-8
CODEN: PSDAE6; ISSN: 0931-9506
DT Journal
LA English
AB As in other European goat breeds, in the French 'Alpine' and 'Saanen' goat races αs2- casein exists as two allelic forms, A and B, identified by gel electrophoresis. Anal. of elution profiles of enzymic digests of purified αs2- caseins A and B fractions and sequencing of some relevant peptides allowed the chemical characterization of both genetic variants, and these are in good agreement with the observed electrophoretic mobilities. αS2- casein B differs from its predominant A counterpart (allelic frequency .apprx.0.85) by an amino acid substitution Ser-Ala-Lys (B)/SerP62-Ala-Glu64(A), which provides indirect evidence of the phosphorylation code of caseins. The lack of a phosphate group on Ser62 in variant αs2- casein B can be readily explained by the Lys/Glu replacement which affects the Glu determinant in the tripeptide phosphorylation recognition site.

L14 ANSWER 13 OF 16 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1993:228588 HCAPLUS
DN 118:228588
TI Sequence of the goat αs2- casein-encoding cDNA
AU Bouniol, Christine
CS Lab. Genet. Biochim., Inst. Natl. Rech. Agron., Jouy-en-Josas, 78350, Fr.
SO Gene (1993), 125(2), 235-6
CODEN: GENED6; ISSN: 0378-1119
DT Journal
LA English
AB The complete nucleotide sequence of a caprine αs2- casein -encoding cDNA and the deduced 223-amino-acid sequence of pre-αs2- casein were determined

L14 ANSWER 14 OF 16 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1992:167497 HCAPLUS
DN 116:167497
TI Multiple mRNA species code for two non-allelic forms of ovine αs2- casein
AU Boisnard, Monique; Hue, Dominique; Bouniol, Christine; Mercier, Jean Claude; Gaye, Pierre
CS Unite Endocrinol. Mol., Inst. Natl. Rech. Agron., Jouy-en-Josas, Fr.
SO European Journal of Biochemistry (1991), 201(3), 633-41
CODEN: EJBCAI; ISSN: 0014-2956
DT Journal
LA English
AB The two-allelic forms of αs2- casein, occurring in ovine milk, differ by an internal deletion of nine amino acid residues, including both cysteine residues at positions 34 and 42 in the mature chain. Sequencing of several αs2- casein cDNAs, isolated from the mammary cDNA library of a single lactating ewe, showed three new types which differed from that previously studied. In addition to the expected deletion of codons +34 to +42, affecting 30-40% of mRNA, another structural difference involving an internal stretch of 44 nucleotides in the 5'-untranslated region, was found. S1-nuclease protection assays confirmed the existence of several types of the relevant mRNA and sequencing of in-vitro-amplified genomic DNA demonstrated the presence of the 44-nucleotide stretch in the αs2- casein transcriptional unit, thus ruling out the possibility of a cloning artifact. The different αs2- casein mRNA, four containing deletions and two containing nucleotide substitutions for a given ewe, can be readily explained by partial exon skipping and allelic differences, resp. This assumption is well supported by the following observations: 5' and 3' ends of both deleted DNA fragments are similar to those of exons; sequences neighboring the 44-nucleotide stretch of the genomic DNA perfectly match consensus sequences described for 3' and 5' ends of introns; the rather simple patterns observed on Southern blots of different enzymic digests of genomic DNA strongly suggest the occurrence of only 1 copy of the αs2- casein gene/haploid genome. During the course of evolution, the αs2- casein-encoding gene has undergone many mutations and some of them might have occurred in regions corresponding to consensus splicing regions of the pre-mRNA. Thus, complete skipping of some exons might be responsible for the shorter sizes of rat and mouse αs2- casein mRNA. If so, the overall organization of the αs2- casein gene in the different species might be more similar than expected from structural comparisons of the cognate mRNA or caseins.

L14 ANSWER 15 OF 16 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1986:46554 HCAPLUS
DN 104:46554
TI Complete sequence of ovine αs2- casein messenger RNA
AU Boisnard, Monique; Petrissant, Guy
CS Lab. Physiol. Lactation, INRA, Jouy-en-Josas, 78350, Fr.
SO Biochimie (1985), 67(9), 1043-51
CODEN: BICMBE; ISSN: 0300-9084
DT Journal
LA English
AB The primary structure of mRNA coding for ovine αs2 casein was determined by chemical sequencing of 3 cDNA clones and of the primer extension products of the longest one. The mRNA was 1024 nucleotides long, excluding the poly(A) tail. The lengths of the 5'-noncoding, coding and 3'-noncoding regions were 53, 669 and 302 nucleotides, resp. A comparison of the nucleotide sequences of ovine αs2- casein and guinea-pig casein A mRNAs revealed an extensive homol. in the 5'- and 3'-noncoding regions. The deduced amino acid sequence of ovine αs2 casein was compared with its bovine and guinea pig counterparts. An heterogeneity was evidenced in the mRNA population of the αs2 casein.

L14 ANSWER 16 OF 16 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1977:417534 HCAPLUS
DN 87:17534
TI Complete amino acid sequence of bovine αS2- casein
AU Brignon, Ghislaine; Ribadeau Dumas, Bruno; Mercier, Jean Claude; Pelissier, Jean Pierre; Das, B. C.
CS Lab. Rech. Proteines, Inst. Natl. Rech. Agron., Jouy-en-Josas, Fr.
SO FEBS Letters (1977), 76(2), 274-9
CODEN: FEBLAL; ISSN: 0014-5793
DT Journal
LA English
AB The complete primary amino acid sequence of bovine αS2- casein was determined by standard methods. In addition, the possible sites of phosphorylation on this protein were localized. This protein contains 207 amino acid residues, including 2 cysteines, and 10-13 phosphate groups and has a calculated mol. weight of 25,150-15,390 daltons.

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(FILE 'HOME' ENTERED AT 14:31:21 ON 08 AUG 2006)

FILE 'REGISTRY' ENTERED AT 14:31:44 ON 08 AUG 2006
L1 1 S NMAINPSK/SQEP
L2 4 S NMAINPSK/SQSP
L3 1 S FALPQY/SQEP
L4 65 S FALPQY/SQSP
L5 1 S FPQYLQY/SQEP
L6 30 S FPQYLQY/SQSP

FILE 'HCAPLUS' ENTERED AT 14:34:35 ON 08 AUG 2006
L7 3 S L1
L8 6 S L2
L9 2 S L3
L10 66 S L4
L11 3 S L5
L12 16 S L6
L13 17 S L4 AND CASEIN
L14 16 S L6 AND CASEIN